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EXAMINER

BELLAMY, TAMIKO D

ART UNIT PAPER NUMBER

2856

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

# Office Action Summary

Application No.

10/803,984

Applicant(s)

MARX ET AL.

Examiner

Tamiko D. Bellamy

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 8, 10, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Dages et al. (5,226,320)

Re claim 1, as depicted in fig. 7, Dages discloses an acoustic guide conduit (e.g., combination of first sound waveguide (4), and second traverse tube (5)) in a container/tank (20/2) with an ultrasonic transducer (e.g., transmitter and receiver (S2)) disclosed close to the end of the acoustic guide for generating ultrasonic pulses and for receiving pulses reflected from the region of a fluid (9). Dages discloses an acoustic guide conduit (e.g., combination of first sound waveguide (4), and second traverse tube (5)) comprising a horizontal approach region (e.g., horizontal tube 5) at one end of the acoustic guide conduit (e.g., combination of first sound waveguide (4), and second traverse tube (5)) disposed close to the container/ tank (20/2) bottom.

Re claim 2, as depicted in fig. 7, Dages discloses the approach region (e.g., horizontal tube 5) extends in a straight line.

Re claim 8, as depicted in fig. 7, Dages discloses an ultrasonic transducer (e.g. transmitter and receiver S2) inside the container/tank (20/2).

Re claim 10, as depicted in fig. 7, Dages discloses an ultrasonic transducer (e.g. transmitter and receiver S2).

Re claim 12, as depicted in fig. 7, Dages discloses at least one reference reflection surface (17,18).

Re claim 14, as depicted in fig. 7, Dages discloses that the acoustic guide conduit (e.g., combination of first sound waveguide (4), and second traverse tube (5)) has at least two opening (6).

3. Claims 1, 2, 4, 5, 8-11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by either Kostin et al. (RU1996124430) or Kostin et al. (RU1996124440).

Re claim 1, as depicted in fig. 1, either Kostin et al. '430 or Kostin et al. '440 discloses an acoustic guide conduit (e.g., measurement tube 4) in a container/tank (5) with an ultrasonic transducer (e.g., ultrasonic converter 1) disclosed close to the end of the acoustic guide for generating ultrasonic pulses and for receiving pulses reflected from the region of a fluid (9). Kostin et al. '430 or Kostin et al. '440 discloses an acoustic guide conduit (e.g., measurement tube 4) comprising a horizontal approach region (e.g., horizontal section) at one end of the acoustic guide conduit (e.g., measurement tube 4) disposed close to the container/ tank (5) bottom.

Re claim 2, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses the approach region (e.g., horizontal section) extends in a straight line.

Re claim 4, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses an acoustic guide conduit (e.g., measurement tube 4) comprising at least one bend with a reflective deflection and/or at least one straight region with a conduit slope angle.

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Re claim 5, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses the ultrasonic transducer (e.g., ultrasonic converter 1) at the bottom portion of the container (5).

Re claims 8 and 9, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses an ultrasonic transducer (e.g. ultrasonic converter1) inside the container/tank (5).

Re claims 10 and 11, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses an ultrasonic transducer (e.g. ultrasonic converter 1) which is inherently a transmitter and receiver.

Re claims 14 and 15, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. discloses fluid inside of the acoustic guide conduit (e.g., measuring tube 4) which inherently has at least two opening (6).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kostin et al. (RU1996124430) or Kostin et al. (RU1996124440) in view of Dages et al. (5,226,320).

Re claim 3, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses an ultrasonic transducer (e.g., ultrasonic converter 1) in a bottom portion of the container (5). Kostin et al. '430 or Kostin et al. lacks the detail of the ultrasonic transducer placed on a side wall of the container. However, the court held in In re Japikes, 86 USPQ 70 (CCPA 1950), that no invention would be given in shifting the location of parts since the operation of the device would not be device. Therefore, to employ either Kostin et al. '430 or Kostin et al. '440 on a ultrasonic transducer disposed on a side wall would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches the uses of ultrasonic transducer disposed at the bottom of a container for determining the level of liquid in a container.

Re claims 6 and 7, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses an ultrasonic transducer (e.g., ultrasonic converter 1) in a bottom portion of the container (5). Kostin et al. '430 or Kostin et al. lacks the detail of the ultrasonic transducer placed on the outside of the container. However, the court held in In re Japikes, 86 USPQ 70 (CCPA 1950), that no invention would be given in shifting the location of parts since the operation of the device would not be device. Therefore, to employ either Kostin et al. '430 or Kostin et al. '440 on a ultrasonic transducer disposed on the outside of a container would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches the uses of ultrasonic transducer disposed at the bottom of a container for determining the level of liquid in a container.

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6. Claims 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kostin et al. (RU1996124430) or Kostin et al. (RU1996124440) in view of Dages et al. (5,226,320)

Re claims 12 and 13, as depicted in fig. 1, Kostin et al. '430 or Kostin et al. '440 discloses an ultrasonic transducer (e.g., ultrasonic converter 1) in a bottom portion of the container (5). Kostin et al. '430 or Kostin et al. '440 lacks the detail of the acoustic guide conduit having at least one reference reflection surface. Dages discloses at least one reference reflection surface (17,18). Therefore, to modify either Kostin et al. '430 or Kostin et al. '440 by employing a reference reflection surface would have been obvious to one of ordinary skill in the art at the time of the invention since Dages teaches a liquid level device having these design characteristics. The skilled artisan would be motivated to combine the teachings of either Kostin et al. '430 or Kostin et al. '440 and Dages since Kostin et al. '430 or Kostin et al. '440 states that his invention is applicable to liquid level measuring device and Dages is directed to a liquid level measuring device.

### *Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy

T.B.  
June 23, 2005

A handwritten signature in black ink, appearing to read "Hezron Williams", followed by a long horizontal line extending to the right.

HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800